

## A New Species of the Genus *Malthinus* (Coleoptera, Cantharidae) from Kitadaitō Island far off Southwest Japan

Kazuhiro TAKAHASHI

239–11, Nagamochi, Hiratsuka, 259–1217 Japan

**Abstract** A new cantharid of the genus *Malthinus* is described from Kitadaitō Island of the Daito Islands far off Southwest Japan under the name of *M. nakanishi* sp. nov. This is the first record of a Japanese cantharid beetle from oceanic island distant from the mainland.

### Introduction

Kitadaitō Island lies on the northwestern Pacific Ocean to the east of the Ryukyu Islands. It is based on a raised atoll, and did not join any continent since it had been formed as a volcanic island about fifty million years ago (KAWANA, 1988). On such an isolated island, occurrence of endemic species is expected as in the case of the Ogasawara Islands of Japan.

Recently, Mr. Motoo NAKANISHI of Matsusaka collected a remarkable beetle when he visited the island in April, 2005, which is obviously a cantharid probably belonging to the genus *Malthinus*. This discovery is very important because it is the first record of a cantharid beetle from the oceanic island. This specimen was sent to me for examination through the courtesy of Messrs. Katsumi AKITA and Hiroshi OTOBE. Besides, additional specimens collected by the same man and his wife at the same place in April, 2006, were also sent to me. After a careful examination, it became clear that there are no close relatives in the genus *Malthinus*. Therefore, I conclude that it is certainly a new species, and am going to describe it in the present paper.

Before going further, I wish to express my cordial thanks to Messrs. Motoo NAKANISHI of Matsusaka, Katsumi AKITA of Tsu and Hiroshi OTOBE of Tsu for their kind help in providing me with valuable materials, and to Dr. Masatoshi TAKAKUWA of the Kanagawa Prefectural Museum of Natural History, Odawara for his critically reading the manuscript of this paper.

### Material and Method

The male genitalia examined were treated with 10% KOH solution at 90°C for about 10 minutes, and sketched in 50% glycerin.

The abbreviations used in the text are as follows: HW: width of head; PW: width of

pronotum; PL: length of pronotum; EW: width of elytra; EL: length of elytra.

### Description

#### *Malthinus nakanishii* sp. nov.

(Figs. 1-5)

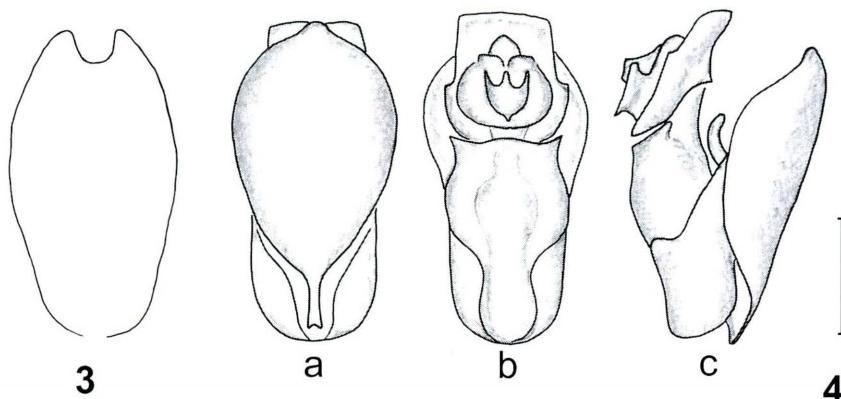
**Male.** Body largely brownish black; head before eyes, apical portions of elytra and posterior and lateral margins of 2nd to 7th sternites yellow; fore femora, basal halves of meso- and metafemora and pronotum except for anterior black margin and anterior median longitudinal blackish maculation yellowish orange.

Head weakly convex in dorsal aspect, densely covered with small punctures though relatively large behind eyes; neck gradually constricted posteriad. Antennae filiform, obviously exceeding the elytral apices; comparative lengths of each segment as follows: 1.67 : 1.00 : 1.14 : 1.23 : 1.45 : 1.34 : 1.30 : 1.30 : 1.25 : 1.20 : 1.31. Eyes prominent; inter-ocular distance broad, 3.41 times as wide as an eye. Mandible provided with a distinct inner tooth. Terminal segments of maxillary and labial palpi simple, not extended apicad. Gular suture distinct; gula very narrow and concave.

Pronotum nearly square, very slightly broader than long, widest at middle; PW/HW 0.87, PW/PL 1.07; surface rather convex, somewhat rugulose, entirely cov-



Figs. 1-2. Habitus of *Malthinus nakanishii* sp. nov. —— 1, Male (holotype); 2, female.



Figs. 3-4. 3. Male eighth sternite of *Malthinus nakanishii* sp. nov. (Scale: 0.25 mm). — 4. Male genitalia of *Malthinus nakanishii* sp. nov.; a, ventral view; b, dorsal view; c, lateral view. (Scale: 0.25 mm).

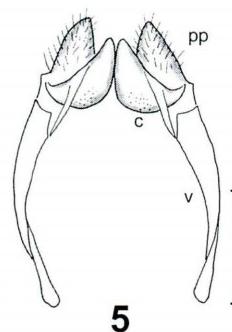


Fig. 5. Female genitalia of *Malthinus nakanishii* sp. nov.; pp, paraproct; c, coxite; v, valvifer. (Scale: 0.25 mm).

ered with small punctures. Legs slender; each claw simple. Elytra abbreviated, densely covered with large punctures though impunctate at apical yellow portions; each puncture somewhat lined longitudinally in the middle; two obscure carinae observed; EW/PW 1.35; EL/EW 1.91.

Abdomen with several posterior segments visible in dorsal view; eighth sternite rather short and broad, with apex distinctly emarginate (Fig. 3). Male genitalia elongate and complicated; basal piece probably originated from tenth sternite, rather elongate and leaf-shaped; inner basal piece probably originated from eleventh sternite, visible in lateral and basal portions; centrophysse, the term first used by BRANCUCCI, 1980, probably originated from tenth tergite, cylindrically depressed, provided with wide and longitudinal furrow in dorsal view; penis oval in outline with very complicated structure, located on the centrophysse (Fig. 4).

Length: 3.1 (2.8-3.3) mm; breadth: 1.0 (0.9-1.0) mm.

**F e m a l e.** Similar to male though wider and larger; eyes smaller; antennae shorter than those of male. Pronotum reddish orange except for anterior margin and longitudinal median blackish maculation. Femora entirely infuscate.

Genitalia as shown in Fig. 5. Coxite rather triangular; base not elongate, connected with base of paraproct. Paraproct separated into two pieces; each piece triangular, entirely furnished with rather long hairs. Valvifer thick and stout.

Length: 3.6–4.0 mm; breadth: 1.1–1.4 mm.

**Type series.** Holotype: ♂, Nagahagu (Sotohagu), Kitadaitō Is., Okinawa Pref., 9–IV–2006, Motoo NAKANISHI leg. Paratypes: 1♂, 1♀, same data as for the holotype; 1♂, same place and date as for the holotype, Mutsuko NAKANISHI leg.; 1♀, same place as for the holotype, 10–IV–2006, Motoo NAKANISHI leg.; 1♀, same place as for the holotype, 8–IV–2005, Motoo NAKANISHI leg.; 1♀, Nagahagu (Uchihagu), Kitadaitō Is., Okinawa Pref., 25–III–2006, K. TAKAHASHI leg.

**Type depositories.** The holotype is deposited in the collection of the Kanagawa Prefectural Museum of Natural History, Odawara. The paratypes are preserved in the collection of mine.

**Distribution.** Japan (Kitadaitō Is., Daitō Isls.)

**Remarks.** The present new species is easily distinguished from the other species of the genus *Malthinus* distributed in Japan and its adjacent areas including East and Southeast Asia by the peculiar color pattern on the body and the conformation of male genitalia.

## 要 約

高橋和弘: 北大東島産の *Malthinus* 属の 1 新種. —— 北大東島 (大東諸島) 産の標本に基づき、ジョウカイボン科の 1 新種 *Malthinus nakanishi* sp. nov. を記載した. 本種は、大東諸島から初めて記録されるジョウカイボン科の種で、顕著な色彩パターンから、*Malthinus* 属の他種とは容易に識別が可能である.

## References

- BRANCUCCI, M., 1980. Morphologie comparée, évolution et systématique des Cantharidae (Insecta: Coleoptera). *Ent. basil.*, 5: 215–388.  
KAWANA, T., 1988. Landform of the Ryukyu Islands. 127 pp. Shinsei-Tosho, Naha. (In Japanese.)